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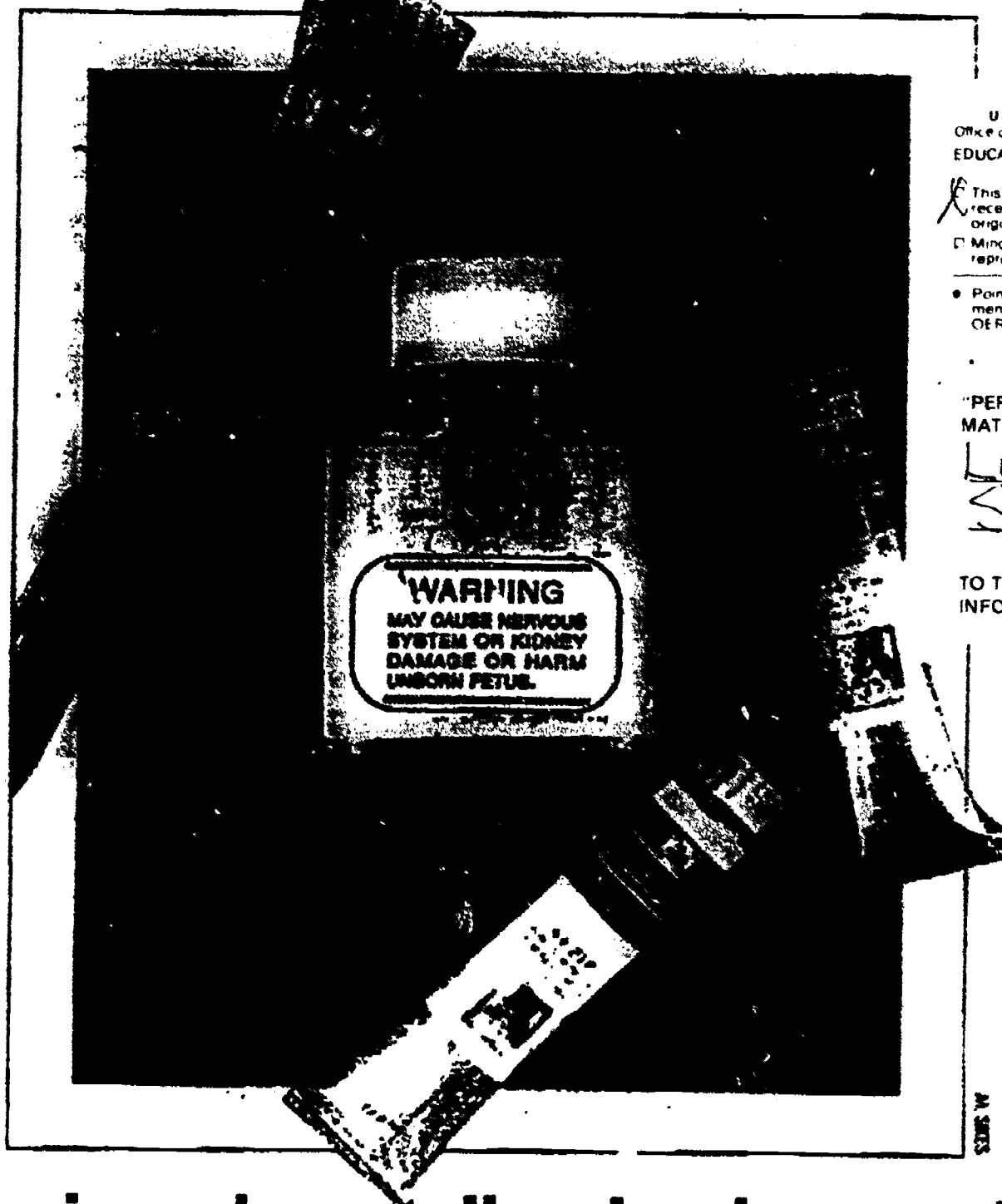
ABSTRACT

Despite federal law requiring that art and craft materials be labeled, many products continue to be sold without adequate identification of their contents. This report summarizes the findings of the U.S. Public Interest Research Group (PIRG) which conducted an investigation in June and July 1991 to determine how art and craft manufacturers comply with the federal labeling law. The investigation found the following: (1) 44 percent (23 of 52) of the art products surveyed that contained toxic chemicals failed to warn of the associated long-term health hazards; (2) only 19% of the supplies surveyed included a phone number on the product label; (3) only 36% included a conformance statement on the label; and (4) different brands of similarly toxic products had different labels--one that warned of the long-term health hazards and one that did not. The PIRG calls upon the Consumer Product Safety Commission to investigate the findings of this report and for government action to enforce the law. (KM)

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ART & the CRAFT of AVOIDANCE

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Toxic art supplies lack warnings despite federal labeling law

Public Interest Research Groups (PIRGs)
September 1991

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ART AND THE CRAFT OF AVOIDANCE
Toxic Art Supplies Lack Warnings Despite Federal Labeling Law

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EXECUTIVE SUMMARY

Art and craft materials that contain toxic chemicals but do not warn of the associated health dangers can be found on retailers' shelves across the country, despite a federal law requiring these products to be labeled for their long-term health hazards.

The ingredients in many art and craft supplies can cause severe lung, kidney, liver, nerve or brain damage, cancer, blood disorders or reproductive damage. In order to protect the millions of Americans -- from professional artists to children to senior citizens -- who use art supplies that can endanger their health, Congress passed a law in 1988 requiring all art and craft supplies to be labeled for their long-term health hazards. The law took effect in November 1990, and now all art and craft supplies must be labeled in compliance with the federal legislation.

The Public Interest Research Groups (PIRGs) conducted an investigation in June and July 1991 to determine whether art and craft manufacturers are complying with the federal labeling law. The investigation found:

- * Forty-four percent (or 23) of 52 art products surveyed that contained toxic chemicals failed to warn of the associated long-term health hazards.
- * Only 19% (or 10) of the 52 toxic art supplies surveyed included an actual phone number on the product label, despite the law's requirement that toxic art supplies include a phone number on the label so that consumers can contact the manufacturer for more detailed safety information.

The survey also revealed that:

- * Only 36% (or 54) of the 150 art products initially surveyed included a conformance statement on the label, making it impossible for consumers to determine whether the product has been checked for toxic chemicals.
- * Different brands of similarly toxic products may have different labels -- one that warns of the long-term health hazards and one that does not.

Despite the federal law designed to inform consumers of the long-term health risks associated with certain art products, inadequately labeled toxic products continue to be sold. Unfortunately, artists, parents and teachers cannot assume that an art product is safe simply because the label does not include health warnings.

PIRG calls upon the Consumer Product Safety Commission to investigate the findings of this report and to enforce the law. Government action to strengthen safety laws in order to protect millions of Americans from toxic art products is also necessary.

INTRODUCTION

Jon Glowacki, at age 13, died suddenly on February 20, 1985. Jon spent much of his free time engaging in art and craft activities and had been at home alone using Ross' rubber cement. A sample of the glue accompanied his body to the medical examiner's office. The medical examiner listed his cause of death as "sudden death associated with inhalation of volatile hydrocarbons." Ross' rubber cement contained n-hexane, an aliphatic hydrocarbon, which has been associated with heart arrhythmia (heartbeat irregularity) and poly neuropathy, a progressive disorder of the nervous system causing motor paralysis and a deficiency of the respiratory muscles.

* * *

For years, millions of Americans have assumed that art and craft materials are safe because they were not properly warned of the risk of long-term hazards by reading the labels of most art supplies.

The problem of toxic art supplies, and their particular danger to children, was first tackled in 1984 when Public Interest Research Groups (PIRGs) in California, Massachusetts, New York, Oregon and the District of Columbia conducted studies of the art supplies used in their local public schools. Each study came to the same conclusion: schoolchildren were routinely using art materials such as rubber cements, permanent markers and clays and glazes which contain dangerously toxic substances. In most instances, teachers were unaware of the potential long-term dangers of the art supplies because the products did not carry chronic hazard warning labels.

As a result of the efforts of the California PIRG and other interested groups to uncover and publicize this problem, in 1984, California passed the first state law in the country to require chronic hazard labeling of art and craft materials and to restrict the use of these products in public schools. Similar laws were enacted in Connecticut, Florida, Illinois, Oregon, Tennessee and Virginia during the next four years.

On the national level, in 1988, President Reagan signed into law the "Labeling of Hazardous Art Materials Act,"¹ which requires art and craft products containing substances that can cause chronic illnesses to have warning labels. The law took effect in November 1990, and now labels on art and craft supplies must include a full list of toxic ingredients and adequate warnings about their long-term health dangers.

This report details the results of a PIRG investigation conducted to determine whether art and craft manufacturers are complying with the federal labeling law. The investigation found that many unlabeled hazardous art supplies continue to be sold. Unfortunately, artists, parents and teachers cannot assume that an art product is safe simply because the label does not include health warnings.

¹Public Law 100-695, November 18, 1988.

HAZARDS OF ART AND CRAFT MATERIALS

Many commonly-used art and craft materials have been associated with cancer, birth defects, and other chronic illnesses.

For example, solvents contained in rubber cements, turpentine and permanent markers, and used in oil painting and silk-screening, have been associated with nervous system damage, internal organ damage, respiratory damage, skin disease and miscarriages. Lead, found in paints, clays and glazes, can poison the renal and nervous systems, and cause anemia, sterility and birth defects. Lead solders contained in stained glass hobby kits have caused lead poisoning in hobbyists. Asbestos, found in talc and clays, is linked to lung cancer, mesothelioma and asbestosis. Cadmium-containing silver solders, used in jewelry-making, metal sculptures, silver brazing, soldering and welding, when inhaled or ingested can result in severe chronic lung and kidney damage, and acute, severe respiratory tract irritation, lung damage and even death.

In 1981, the National Cancer Institute (NCI) released the results of a study of death certificates of 1598 professional artists. The study found significantly elevated risks of arteriosclerotic heart disease, leukemia, and cancer of the bladder, colon, rectum, kidney and brain among white male artists. Among female artists studied, excess numbers of deaths due to cancer of the rectum, lung and breast were noted.² Results from a case-control interview study by NCI of bladder cancer patients found further support for an association between bladder cancer and employment as an artistic painter.³

MILLIONS AT RISK

The health of millions of Americans is threatened by the presence of hazardous substances contained in art and craft products. A Harris poll from November, 1984 found that 50 million Americans paint or draw as a hobby, 29 million make pottery or ceramics and 15 million sculpt or work with clay. In addition, the National Endowment for the Arts Research Division estimates that there are over one million professional artists and craftspeople in the United States.

²"Mortality Patterns Among Professional Artists: A Preliminary Report." Barry A. Miller, Aaron Blair, and Michael McCann, National Cancer Institute (1985).

³"Cancer Risk Among Artistic Painters," Barry A. Miller, Debra Silverman, Robert N. Hoover and Aaron Blair, American Journal of Industrial Medicine 9:281-287 (1986).

CHILDREN AT RISK

Beginning in 1984, PIRGs in California, Massachusetts, New York, Oregon and the District of Columbia conducted studies of the art and craft supplies being used in the public schools in their areas. The studies found that children routinely use art materials such as rubber cements, permanent markers and clays and glazes which contain many of the same toxic substances that have been documented to cause chronic illnesses in adults. In most instances, teachers and school officials were unaware that these products posed dangers and were eager to rid the schools of inappropriate supplies as soon as they were informed of the hazards in the products.

When compared to adults, children are at a higher risk of developing diseases from exposure to hazardous substances for four reasons. First, exposure by a child to the same amount of a substance as an adult experiences will result in a greater concentration of that substance in the child's body. This phenomenon is illustrated best with an analogy familiar to everybody -- a child who drinks an alcoholic beverage will be affected much more than an adult who consumes the same amount of alcohol.

Second, children's bodies are still developing, so that damage to vital immune mechanisms can lower future resistance to infection and disease. Children's developing nervous systems and brains are particularly sensitive to damage from substances that cause or contribute to chronic harm, where effects may not be immediately apparent.⁴

Third, children's high metabolic rate results in a greater tendency to absorb toxic chemicals. Finally, children often do not follow directions properly and they tend to misuse products by, for example, inappropriately putting things in their mouths. For these four reasons, regulations are needed to protect children from exposure to toxic substances contained in art and craft supplies.

Seven states -- California, Connecticut, Florida, Illinois, Oregon, Tennessee, and Virginia -- have passed laws which not only require chronic hazard labeling of art and craft materials, but also restrict the use of these products in public schools. The California Department of Health Services has developed a list of acceptable art products for elementary school children. Safer substitutes for most of the toxic art supplies used in schools are available. (See Appendix A for a list of safe substitutes.)

In 1988, Congress passed legislation -- modeled on the state laws -- to require art and craft supplies to be labeled for their long-term health hazards and appropriate use. Unfortunately, the federal law does not ban the use of toxic art products in elementary schools or require the development of a list of acceptable products for

⁴"Proceedings of the SOEH Conference on Health Hazards in the Arts and Crafts," Society for Occupational and Environmental Health, editors: Michael McCann and Gail Barazini, p.146 (1980).

elementary school children. PIRGs continue to work at a state level to protect children from hazardous art supplies and are supporting legislation in Massachusetts and New Jersey to ban the use of these products in elementary schools.

In the absence of a comprehensive state program restricting the use of hazardous art supplies in schools, school officials should voluntarily establish programs to use only non-hazardous art materials with elementary school children, and to use toxic materials in secondary schools only under proper conditions. In order to carry out a program of safe purchase and use of art products, however, school officials need to know two things: 1) which art products are too hazardous for young children; and 2) how teachers and older children can use hazardous products safely. Without comprehensive labeling and easy identification of hazardous products, school systems do not have the expertise to establish effective art materials safety programs.

THE FEDERAL ART SUPPLIES LABELING LAW

The federal law requires art and craft products containing substances that can cause chronic illnesses to have warning labels. Modeled on the laws already passed in seven states, the federal law simply adopted an existing voluntary standard -- ASTM D4236-88 -- as a mandatory labeling standard for arts and craft materials.

According to industry groups, about 85 percent of the art and craft industry's products complied with the voluntary standard even before the federal law was passed. The 15 percent that had not participated in the voluntary labeling program were given two years after the law passed to prepare and respond to this new requirement.

Beginning November 1990, art and craft supplies that pose long-term health risks must have warning labels that include:

- 1) A warning statement of the hazard, such as "CANCER AGENT! EXPOSURE MAY PRODUCE CANCER";
- 2) identification of the hazardous ingredients;
- 3) guidelines for safe use, such as "Avoid inhalation/ingestion/skin contact", or "Use NIOSH-certified mask for dusts/mists/fumes"; and
- 4) the name, address, and telephone number of the manufacturer or importer.

It is the responsibility of the federal Consumer Product Safety Commission (CPSC) to ensure that hazardous art materials meet the federal labeling requirements.

THE PIRG INVESTIGATION

Parents cannot choose safe art and craft supplies for children unless the products list the ingredients and warn of any associated hazards. Artists and hobbyists cannot use art supplies appropriately unless the products provide information on potential hazards and how to avoid them. PIRG conducted an investigation to determine whether art and craft supplies are adequately labeled for their long-term health hazards and appropriate use.

Methodology

PIRG researchers surveyed art stores, hardware stores, and drug stores, recording detailed information on the labeling of 150 art and craft products that might pose long-term health hazards. The researchers targeted the types of commonly-used products that have often been found to pose chronic risks, including paints, adhesives, fixative sprays, paint thinners, shellacs, varnishes, dyes, inks, ceramic glazes, and silk-screening materials.

The researchers contacted each manufacturer at the address provided on the product label and requested a copy of the Material Safety Data Sheet (MSDS) for each product.

The MSDS lists information necessary for a person to correctly and safely use a chemical product. The Department of Labor requires industries using a toxic substance to have these forms available for their workers. The MSDS provides the name of a chemical product, identifies any toxic ingredients, lists its physical properties, its fire and explosion data, its acute and chronic health hazards, and cleanup information. The MSDS also lists special precautions to take before using the product and protective equipment to use the product. (See Appendix B for a sample MSDS.) Within one month, many of the companies contacted complied with the written requests. However, some companies did not reply at all, even after several attempts were made to contact them. MSDS's were returned for 91 of the 150 products surveyed.

The ingredient and chronic hazard information from the MSDS was compared to the information provided by the product label to determine whether the label adequately informs the consumer of the long-term health dangers. In some cases, the MSDS did not reflect the most recent scientific information on the chronic health hazards of a particular chemical. The Environmental Protection Agency's "Hazardous Substance Fact Sheet" on a chemical was used to supplement the information on incomplete MSDS's. Fifty-two of the products surveyed contained toxic chemicals and should have been labeled for their chronic hazard, according to the review of product ingredients from the product labels, MSDS's and supplemental information. Twenty-nine of those 52 products (56%) were adequately labeled.

Findings

- A. Forty-four percent (or 23) of the 52 toxic art products surveyed failed to warn of the associated long-term health hazards.

PIRG researchers surveyed art & craft stores and found 52 art products that contain toxic chemicals and should be labeled for their long term health hazards. Nearly half (44%) did not warn of the associated health risks.

No attempts were made to be comprehensive. The following list of 23 toxic art products are unfortunately just a sampling of inadequately labeled art and craft supplies on retailers' shelves.

1. Liquitex Artist Rectified Turpentine, Binney & Smith, Easton, PA 18044

Label Statement
(What the Label Says about Chronic Hazards)

Use in well-ventilated area. Avoid prolonged breathing of vapor.

[No warning of long-term health hazards.]

Known Hazards
(What the Label Doesn't Say)

Chronic exposure may cause predisposition to pneumonia and chronic nephritis. Chronic exposure can produce allergenic sensitization. (Source: MSDS)

2. Sunnyside pure gum spirits of turpentine, Sunnyside Corp., Wheeling, IL 60090.

Label Statement

Health Hazard. Avoid breathing vapor or spray mist. Provide plenty of fresh air by opening doors and windows or use explosion proof ventilation equipment.

Known Hazard

May cause predisposition to pneumonia and chronic nephritis. Chronic exposure can produce allergenic sensitization. Possibility of teratogenic effects exists for pregnant women. (Source: MSDS)

3. Nankeec Gum Turpentine, Sunnyside Corporation, Wheeling, IL 60090.

Label Statement

gum spirits of turpentine

[No warning of long-term health hazards.]

Known Hazards

May cause predisposition to pneumonia and chronic nephritis. Chronic exposure can produce allergenic sensitization. Possibility of teratogenic effects exists for pregnant women. (Source: MSDS)

4. Gum Spirits of Turpentine, M. Grumbacher, Cranbury, N.J. 08512.

Label Statement

[No warning of long-term health hazard]

Known Hazards

Acute exposure can produce allergic sensitization. Possibility of teratogenic effects exists for pregnant women. (Source: MSDS)

5. Columbia Artists' Rubber Cement, Columbia Cement Co., Freeport, NY 11520

Label Statement

[No warning of long-term health hazards.]

Known Hazards

Contains Hexane.

Overexposure to components has been suggested as a cause of the following effects in humans: Central nervous system damage, damage to peripheral nerve tissue resulting in muscular weakness and loss of sensation in the extremities, brain cell damage. (Source: MSDS)

6. Duco Cement, Devcon Corp., Danvers, MA 01923

Label Statement

Contains acetone & Butyl Acetate

[No warning of long-term health hazards.]

Known Hazards

Prolonged or repeated exposure by inhalation of vapor and/or skin contact with the liquid can damage the nervous system, blood, and kidneys. Symptoms may include those of acute inhalation as well as loss of appetite, weight loss, and personality changes. (Source: MSDS)

7. Val-Oil, Valspar Corp., Minneapolis, MN 55415.

Label Statement

Contains Petroleum Distillate.

Avoid prolonged contact with skin and breathing vapor or spray mist.

Use only with adequate ventilation.

[No warning of long-term health hazards.]

Known Hazards

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. (Source: MSDS)

8. **DURO Spray Adhesive**, Loctite Corp., Cleveland, OH 44128.

Label Statement

Hexane or Dimethyl oxide.

Do not breathe vapor.

[No warning of long-term health hazards.]

Known Hazards

Chronic exposure to hexane at airborne concentrations of 1800 MG/M3 and above have been associated with the development of polyneuropathy. (Source: MSDS)

9. **PENTEL Correction Pen (Red)**, Pentel of America, Torrance, CA 90503.

Label Statement

n/a

Known Hazards

Contains 1,1,1-trichloroethane (methyl chloroform) and n-hexane.

Most likely route of exposure - INHALATION; target organ systems and effects: CNS depression, Cardiac arrhythmias. (Source: MSDS)

10. **Design Art Marker**, Faber-Castell Corporation, Lewisburg, TN 37091.

Label Statement

Caution. Contains Xylene. Use with Adequate ventilation.

[No warning of long-term health hazards.]

Known Hazards

At High Concentration may cause dizziness, minor reversible kidney & liver damage. (Source: MSDS)

11. **Decocolor Opaque Paint Marker**, Uchida of America, Carson, CA 90746.

Label Statement

Caution. Contains Xylene. Use only in well ventilated area.

[No warning of long-term health hazards.]

Known Hazards

Xylene is a teratogen, damages bone marrow, may lead to liver and kidney damage. (Source: EPA)

[Note: The MSDS form does not mention chronic hazards.]

12. E-6000 Adhesive Sealant, Eclectic Products, Inc., Carson, CA 90745.

Label Statement

CONTAINS: Toluene, VM and P Naphtha.

Use with adequate ventilation.

[No warning of long-term health hazards.]

Known Hazards

Excessive inhalation of vapors can cause nasal and respiratory irritation, central nervous effects and anesthetic or narcotic effects.

Overexposure to components of this product have been suggested as a cause of the following effects in humans: liver abnormalities. (Source: MSDS)

Toluene is associated with liver and kidney damage, damage to bone marrow, and possible brain damage. (Source: EPA)

13. Folk Art Mud, Old Turnpike Tolehouse, Wayne, NJ 07470.

Label Statement

Contains petroleum distillates.

[No warning of long-term health hazards.]

Known Hazards

Contains Mineral spirits, ethyl benzene, crystalline silica (hazardous only as dust when product is sanded).

Skin contact -- Prolonged or repeated exposure may cause dermatitis. Reports have associated permanent brain and nervous system damage with repeated, prolonged overexposure to solvents among persons engaged in the painting trade. (Source: MSDS)

14. Glitter Magic, Walco-Linck Co., Clifton, NJ 07015.

Label Statement

Contains Toluene. Do not breathe vapors.

[No warning of long-term health hazards.]

Known Hazards

Toluene is associated with liver and kidney damage, damage to bone marrow, and possible brain damage. (Source: EPA)

[NOTE: MSDS form states "Chronic: None known."]

15. Tru Bond Rubber Adhesive, sold by True Value Hardware Stores, Chicago, IL 60614.

Label Statement

Contains Toluene & Petroleum distillates. Use with adequate ventilation.

[No warning of long-term health hazards.]

Known Hazards

Toluene is associated with liver and kidney damage, damage to bone marrow, and possible brain damage. (Source: EPA)

[NOTE: Though MSDS form was requested, it was never received.]

16. Mostenbocker Lift-Off Aerosol Cleaner, Loctite Corp. Cleveland, Oh 44128.

Label Statement

Contains xylol, Petroleum distillate, chlorinated solvents.

[No warning of long-term health hazards.]

Known Hazards

Contains 1,1,1-Trichloroethane and xylene. Acute exposure to xylene vapor may cause central nervous system depression and minor reversible effects upon liver and kidneys. (Source: MSDS)

17. Copper Topper Antiquing Solution, Modern Options, San Francisco, CA 94103.

Label Statement

Contains ground copper particles, ammonia, ethylene glycol, ethylene glycol monobutyl ether.

Use only in well-ventilated area. Do not inhale vapor.

[No warning of long-term health hazards.]

Known Hazards

Ethylene glycol has teratogenic effects and is associated with kidney and brain damage. Glycol ethers may cause birth defects and damage to the reproductive system. (Source: EPA)

[Note: The MSDS form states: "Chronic: None Known."]

18. Bond 527 Multi-Purpose Cement, Bond Adhesives Co., Newark, NJ 07114.

Label Statement

Contains Acetone. Use only in well-ventilated area. Avoid vapors.

[No warning of long-term health hazards.]

Known Hazards

Contains acetone and isopropanol. The solvent system of this product may aggravate pre-existing disorders. (Source: MSDS)

Ingestion of acetone may cause liver and kidney damage. Both acetone and isopropanol can cause central nervous system depression. Isopropanol may cause liver and kidney damage based on animal data. (Source: EPA)

19. Z-Pro Water-Based Spray Paint, Z-Pro, Milwaukee, WI 53222.

Label Statement

[No warning of long-term health hazards.]

Known Hazards

Contains Ethylene Glycol Monobutyl ether.
(Source: MSDS)

Ethylene glycol monobutyl ether can cause liver and kidney damage and central nervous system depression; may cause blood disorder based on animal data. (Source: EPA)

[NOTE: MSDS form only lists acute hazards associated with this chemical.]

20. ENVIROSPRAY acrylic water-based spray paint, Environmental Technology, Inc., Fields Landing, CA 95537.

Label Statement

[No warning of long-term health hazards.]

Known Hazards

Contains Ethylene Glycol Monobutyl Ether and Isopropanol. (Source: MSDS)

Ethylene glycol monobutyl ether can cause liver and kidney damage and central nervous system depression; may cause blood disorder based on animal data. Isopropanol can cause central nervous system depression and may cause liver and kidney damage based on animal data. (Source: EPA)

[NOTE: MSDS form only lists acute hazards associated with these chemicals.]

21. Denatured Alcohol Solvent, Sunnyside Corp., Wheeling, IL 60090.

Label Statement

Contains denatured ethyl alcohol & less than 4% methanol.

[No warning of long-term health hazards.]

Known Hazards

Overexposure to methanol can result in acidosis and visual disturbances which may progress to permanent loss of vision. (Source: MSDS)

22. Pre-tested Odorless Thinner, M. C. Cumbacher, Cincinnati, OH 45217.

Label Statement

Use with adequate ventilation. Contains petroleum distillates.

[No warning of long-term health hazards.]

Known Hazards

Contains Naphta. Kidney damage in male rats with prolonged exposure. High vapor concentration are anesthetic and may have other central nervous system effects. (Source: MSDS)

23. Odorless Turpenoid, Martin/E. Weber Company, Philadelphia, PA 19154.

Label Statement

Petroleum Distillates.

[No warning of long-term health hazards.]

Known Hazards

While this material has a low level of toxicity, reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. (Source: MSDS)

B. Only 19% (or 10) of the 52 toxic art supplies surveyed included an actual phone number on the product label.

The federal labeling law requires art supplies that contain chronic hazards to be labeled with "an appropriate telephone number," but the majority of art and craft materials do not include this important information.

The purpose of placing a phone number on an art product is to allow consumers to contact a manufacturer for more detailed information about chronic hazards, ingredients or safe use. Manufacturers are the only source of complete ingredient information including non-hazardous ingredients and trace impurities to which an allergic individual may react. The manufacturers have Material Safety Data Sheets for each art product that lists the identity of any hazardous ingredients, routes of entry into the body, acute and chronic health effects, cancer status, signs and symptoms of exposure, medical conditions aggravated by exposure, and precautions for safe handling and use.

Manufacturers are also well-equipped to provide exposure information because they understand how the product is used, know in what form the material is encountered (liquid, dust, mist, vapor, etc.), are familiar with conditions in homes, studios or school classrooms, and other factors affecting exposure.

Industry groups argue that the statement, "Call your local poison control center," complies with the law's requirements. But a poison control center would not be able to provide important information about chronic hazards that the manufacturer itself can provide. The CPSC has interpreted the law's requirement for "an appropriate phone number" to be an actual phone number that a consumer can contact to obtain more information about the chronic hazard presented by the product, but must make it clear to manufacturers that the agency will enforce this requirement.

C. Only 36% (or 54) of the 150 art products surveyed included a conformance statement on the label.

All art and craft supplies, whether or not they contain toxic chemicals, should be labeled with the statement "Conforms to ASTM D-4236." The conformance statement serves as evidence that the manufacturer has done the proper analysis under the federal law. Unless manufacturers are required to place a conformance statement on the product, consumers will not know whether a product without a warning label contains no hazardous chemicals OR whether it simply has not been analyzed to determine its toxicity.

Moreover, a requirement for a conformance statement on product labels ensures that manufacturers who comply with the law and label their products will not be penalized in the marketplace. Consumers are more likely to purchase an unlabeled art product than one that contains a warning label, in the belief that the unlabeled product is safer. Yet the contents of the bottle without the label may be just as, or even more, dangerous. If consumers know that those art supplies that have been checked for hazardous ingredients will either have a warning label or a conformance label, they will be less likely to choose an unlabeled product, and the bad actors will not profit from their disregard for the law.

The voluntary labeling standard that the federal law now mandates requires a conformance statement to appear on the product label whenever practical, but also allows the manufacturer to place the conformance statement on point-of-purchase signs or literature, or in response to a formal request for bid or proposal. The best way to ensure that consumers are notified that a product has been reviewed for hazardous ingredients is to require a conformance statement on the product label. The CPSC should require that the labels of all arts and crafts supplies include a conformance statement.

- D. PIRG found that different brands of similarly toxic products may have different labels -- one that warns of the long-term health hazards and one that does not.

In the search for inadequately labeled art and craft products, PIRG recently noted that different brands of a similar product (turpentine, for example) were labeled differently. One would warn of the long-term health hazards while the other would not. Not only are consumers misled about the relative safety of these products but manufacturers that comply with the federal labeling law are penalized in the marketplace, because consumers are more likely to choose a product with no chronic hazard warning label, assuming that an unlabeled product is safer.

Example

Similarly toxic products, but different labels mislead consumers

TURPENTINE

Conforming Label

Non-Conforming Label

CAUTION: CONTAINS TURPENTINE

Vapors collect in low spots and spread long distances even under closed doors. **Provide fresh air ventilation during and after use to prevent build up of vapors.** Use only with cross ventilation especially at floor level. To avoid breathing vapors or spray mist, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches or dizziness, increase fresh air or wear respiratory protection (NIOSH/MSHA TC23C or equivalent) or leave the area.

NOTICE: Reports have associated repeated and prolonged occupational over-exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Oriole Brand Gum Turpentine
The Warner Graham Co.
Cockeysville, MD 21030

Use in well-ventilated area. Avoid prolonged breathing of vapor.

Liquitex Artist Rectified Turpentine
Binnev & Smith Inc.
Easton, PA 18044

RECOMMENDATIONS

The health of millions of Americans -- from professional artists to children to senior citizens -- is threatened by the presence of hazardous substances contained in art and craft supplies. Despite the passage of a federal law designed to inform consumers of the long-term health risks associated with certain art products and the appropriate way to use these products, inadequately labeled toxic products continue to be sold.

In order to protect children and consumers from hazardous art supplies, the PIRGs make the following three recommendations:

1. **As the federal agency responsible for the implementation and enforcement of the labeling law, the Consumer Product Safety Commission (CPSC) must increase its enforcement efforts and must complete the rulemaking process to fully implement the law.**

CPSC investigators should check art and craft materials to ensure that each product either carries an appropriate warning label or a conformance statement. Failure to label a product properly would subject the manufacturer to civil penalties.

The federal labeling law also required the CPSC to issue guidelines and criteria for use by the manufacturers in assessing chronic hazards by November 1989, but these guidelines have not yet been issued in final form. Similarly, the CPSC has not yet promulgated the final regulations clarifying that the labels should include a phone number and a conformance statement. While the application of the voluntary standard was made mandatory for all art and craft materials by Congress, and is therefore not a subject for Commission decisions, the failure of the CPSC to issue final regulations has caused some art and craft manufacturers to ask for a delay in enforcement. The CPSC must send a clear message to the manufacturers of art and craft materials that the agency intends to enforce the labeling law despite the delay in issuing chronic hazard guidelines.

2. **Congress and state legislatures should pass legislation to ban the use of toxic art supplies in elementary schools, ensure that toxic art supplies used in secondary schools are used safely, and require the development of a list of acceptable products for elementary school children.**

Children, who are at a higher risk from exposure to hazardous substances, should not be allowed to use toxic art materials. Regulations are needed to protect children from exposure to toxic substances contained in commonly used art materials such as rubber cements, permanent markers and clays and glazes.

3. **Congress and state legislatures should enact legislation to truly prevent the risks associated with hazardous substances by reducing and gradually eliminating the production and use of toxic chemicals.**

Art products are only one way that Americans are exposed to toxic chemicals. Each year, American companies produce or use at least 350 billion pounds of toxic chemicals, more than 1400 pounds per person. The EPA estimates that toxic chemicals are present in the body tissue of 99 percent of all Americans.

The only way to truly prevent the risks associated with hazardous substances is to reduce and gradually eliminate their production and use. U.S. Representative Gerry Sikorski (D-MN) has introduced the Community Right to Know More Act of 1991, H.R. 2880, which provides the public with a solution to the toxics crisis. The bill requires industries to publicly report on toxic chemical production, use and releases. It also requires industries to develop plans for reducing the toxic problem at its source.

For more information on the dangers associated with art and craft products, contact:

Center for Safety in the Arts
5 Beekman Street, Suite 1030
New York, NY 10038

Arts, Crafts and Theater Safety
181 Thompson Street, #23
New York, NY 10012

APPENDIX A

Art materials: Recommendations for Children Under 12

Do Not Use

Dusts and Powders

1. Clay in dry form. Powdered clay, which is easily inhaled, contains free silica and possible asbestos. Do not sand dry clay pieces or do other dust-producing activities.
2. Ceramic glazes or copper enamels.
3. Cold water, fiber-reactive dyes or other commercial dyes.
4. Instant paper maches (create inhalable dust and some may contain asbestos fibers, lead from pigments in colored printing inks, etc.).
5. Powdered tempera colors (create inhalable dusts and some tempera colors contain toxic pigments, preservatives, etc.).
6. Pastels, chalks or dry markers that create dust.

Solvents

1. Solvents (e.g., turpentine, toluene, rubber cement thinner, and solvent-containing materials: solvent-based inks, oil-based paints, rubber cement).
2. Solvent-based silk screen and other printing inks.
3. Aerosol sprays.
4. Epoxy, instant glue, airplane glue or other solvent-based adhesives.
5. Permanent felt tip markers which may contain toluene or other toxic solvents.

Toxic Metals

1. Stained Glass projects using lead came, solder, flux, etc.
2. Arsenic, cadmium, chrome, mercury, lead, manganese, or other toxic metals which may occur in pigments, metal filings, metal enamels, glazes, metal casting, etc.

Miscellaneous

1. Photographic chemicals
2. Casting plaster. Creates dust and casting hands and body parts has resulted in serious burns.
3. Acid etches and pickling baths.

Substitutes

1. Order lead-free, premixed clay. Wet mop or sponge surfaces thoroughly after using clay.
2. Use water-based paints instead of glazes. Teachers may water-proof pieces with shellac or varnish.
3. Use vegetable and plant dyes (e.g., onionskins, tea, flowers and food dyes).
4. Make paper mache from black and white newspaper and library or white paste.
5. Use liquid paints or paints the teacher pre-mixes.
6. Use crayons, oil pastels or dustless chalks.

1. Use water-based products only.
2. Use water-based silk screen inks (look for printing materials containing safe pigments).
3. Use water-based paints with brushes or water-based dyes.
4. Use white glue or school paste.
5. Use only water color markers.

1. Use colored cellophane and black paper to simulate lead.
2. Get ingredient information or Material Safety Data Sheets on products which are uncertified to be certain they are free of toxic metals.

1. Use colored paper and make collages.
2. Teacher can mix plaster in ventilated area or outdoors for sand casting and other safe projects.
3. Should not use techniques employing these chemicals.



MATERIAL SAFETY DATA SHEET

APPENDIX B

Consumer Products Division, Division of Borden, Inc.

180 EAST BROAD STREET, COLUMBUS, OHIO 43215

For ordering information, additional copies of MSDS, etc., 800-848-9400

For technical information only, 614-431-8680

THE OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200 REQUIRES THAT THE INFORMATION CONTAINED ON THIS SHEET BE MADE AVAILABLE TO YOUR WORKERS

INSTRUCT YOUR WORKERS TO HANDLE THIS PRODUCT PROPERLY

DESCRIPTION: KRYLON 1306 WORKABLE FIXATIF SPRAY COAT.
PRODUCT TYPE: "AEROSOL" DRAWING FIXATIVE
APPLICATION: ITEM: 1306

06-MAR-90

SIGNAL WORD DANGER!

THIS MATERIAL IS A "HEALTH HAZARD" AND/OR A "PHYSICAL HAZARD" AS DETERMINED WHEN REVIEWED ACCORDING TO THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION 29 CFR PART 1910.1200 "HAZARD COMMUNICATION" STANDARD.

CHEMICAL HAZARD RATINGS

HEALTH-2(MODERATE)

FIRE-4(EXTREME)

REACTIVITY-0(LEAST)

CHRONIC--*

29CFR1910.1200 HAZARDOUS INGREDIENTS/REPORTED HEALTH EFFECTS

CAS/REGISTRY NO. MATERIAL DESCRIPTION % RANGE

THE INGREDIENTS LISTED BELOW HAVE BEEN ASSOCIATED WITH ONE OR MORE OF THE LISTED IMMEDIATE AND/OR DELAYED (*) HEALTH HAZARDS. RISK OF DAMAGE AND EFFECTS DEPENDS UPON DURATION AND LEVEL OF EXPOSURE. BEFORE USING OR HANDLING, READ AND UNDERSTAND THE MSDS.

07-83-0 *ISOPROPANOL

1-5

NOTE REVISED OSHA PEL

MAY CAUSE LIVER DAMAGE BASED ON ANIMAL DATA

MAY CAUSE KIDNEY DAMAGE BASED ON ANIMAL DATA

CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. SIGNS AND SYMPTOMS

MAY INCLUDE HEADACHE, DIZZINESS, NAUSEA, VOMITING,

UNCONSCIOUSNESS AND EVEN ASPHYXIATION.

— SEE FOOTNOTE C.

ACGIH TLV: 400 PPM (380 MG/M3) TWA: 500 PPM (1225 MG/M3) STEL

OSHA PEL: 400 PPM (380 MG/M3) TWA: 500 PPM (1225 MG/M3) STEL

NIOSH DOCUMENT NUMBER: 76-142

07-84-1 *ACETONE

50-70

NOTE REVISED OSHA PEL

INGESTION MAY CAUSE LIVER DAMAGE

INGESTION MAY CAUSE KIDNEY DAMAGE.

CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. SIGNS AND SYMPTOMS

MAY INCLUDE HEADACHE, DIZZINESS, NAUSEA, VOMITING,

UNCONSCIOUSNESS AND EVEN ASPHYXIATION.

— SEE FOOTNOTE C.

ACGIH TLV: 750 PPM (1780 MG/M3) TWA: 1000 PPM (2375 MG/M3) STEL

OSHA PEL: 750 PPM (1800 MG/M3) TWA: 1000 PPM (2400 MG/M3) STEL

NIOSH DOCUMENT NUMBER: 78-173

75-28-5 MONOTAME

10-30

— SEE FOOTNOTE C.

ACGIH TLV: NONE ESTABLISHED

OSHA PEL: NONE ESTABLISHED

100-85-8 2-PROPANOL, 1-METHOXY-, ACETATE

5-10

— SEE FOOTNOTE C.

ACGIH TLV: NONE ESTABLISHED

OSHA PEL: NONE ESTABLISHED

111-76-2 *ETHYLENE GLYCOL MONOBUTYL ETHER

1-5

NOTE REVISED OSHA PEL

CAN CAUSE LIVER DAMAGE.

CAN CAUSE KIDNEY DAMAGE.

MAY CAUSE BLOOD DISORDER BASED ON ANIMAL DATA.

CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. SIGNS AND SYMPTOMS

MAY INCLUDE HEADACHE, DIZZINESS, NAUSEA, VOMITING,

UNCONSCIOUSNESS AND EVEN ASPHYXIATION.

— SEE FOOTNOTE C.

ACGIH TLV: SKIN - 25 PPM (120 MG/M3)

OSHA PEL: SKIN - 25 PPM (120 MG/M3) TWA

8004-70-0 NITROCELLULOSE

1-5

— SEE FOOTNOTE C.

ACGIH TLV: NONE ESTABLISHED

OSHA PEL: NONE ESTABLISHED

FOOTNOTE C: AS OF THE DATE OF ISSUANCE OF THIS DOCUMENT, THIS MATERIAL HAS NOT BEEN LISTED BY NTP, IARC OR OSHA AS A CARCINOGEN.

PHYSICAL DATA

APPEARANCE AND PHYSICAL STATE

LIQUID & SOLID

AUTOCOMBUSTION TEMPERATURE, DEG F

NOT AVAILABLE

BOILING POINT, DEG F @ 760 MM HG

> 100 DEGREES F

EVAPORATION RATE (BUTYL ACETATE = 1)

> 1

FHSA: 16CFR1500.3(C) (6)

EXTREMELY FLAMMABLE

FLASH POINT, DEG F

> 100

FLASH POINT, PROPELLANT, DEG F

< -117 (ESTIMATED)

ODOR

HYDROCARBON SOLVENT

ODOR THRESHOLD, PPM

NOT AVAILABLE

PERCENT VOLATILE BY WEIGHT

100

PH @ 68 DEG F

ESSENTIALLY NEUTRAL

PRESSURE IN CONTAINER, PSIG @ 70 F

APPROXIMATELY 35

SOLUBILITY IN WATER @ 68 DEG F

100

SPECIFIC GRAVITY

0.75

UPPER FLAMMABLE LIMITS, % BY VOL

NOT AVAILABLE

VAPOR DENSITY (AIR = 1) @ 68 DEG F

0.75

VAPOR PRESSURE - SEE CAN PRESSURE

100

COEFFICIENT OF WATER OIL DIST. @ 68 DEG F

100

IMMEDIATE HEALTH HAZARD DATA

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN

INGESTION: MAY BE HARMFUL IF SWALLOWED

INHALATION: MAY BE HARMFUL IF INHALED

IRRITATION OF NOSE, THROAT AND LUNGS

CAN CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION

SKIN: CAUSES IRRITATION

EYES: CAUSES IRRITATION

HANDLING PRECAUTIONS

SKIN ABSORPTION: AVOID CONTACT WITH SKIN OR CLOTHING

INHALATION: USE WITH ADEQUATE VENTILATION TO AVOID BREATHING VAPORS

OR SPRAY MIST. OPEN WINDOWS AND DOORS OR USE OTHER MEANS SUCH

AS AN EXHAUST FAN TO ENSURE FRESH AIR ENTRY DURING APPLICATION

AND DRYING.

IF YOU EXPERIENCE EYE WATERING, HEADACHE OR DIZZINESS, STOP WORK

FRESH AIR, WEAR RESPIRATORY PROTECTION (NIOSH APPROVED)

EQUIVALENT), OR LEAVE THE AREA

SKIN: AVOID CONTACT WITH SKIN

EYES: AVOID CONTACT WITH EYES

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL PRACTICES AND LABEL

PRACTICES. THESE PRACTICES INCLUDE AVOIDING UNNECESSARY

EXPOSURE AND REMOVAL OF THE MATERIAL FROM EYES, SKIN AND

CLOTHING.

WASH THOROUGHLY AFTER HANDLING

EMERGENCY AND FIRST AID PROCEDURES

SKIN ABSORPTION: IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES

OR SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE

REMOVING CONTAMINATED CLOTHING AND SHOES

WASH CLOTHING AND SHOES BEFORE REUSE.

INGESTION: IF ACCIDENTLY SWALLOWED, DILUTE BY DRINKING LARGE

QUANTITIES OF WATER. IMMEDIATELY CONTACT POISON CONTROL CENTER

OR HOSPITAL EMERGENCY ROOM FOR ANY OTHER ADDITIONAL TREATMENT

DIRECTIONS.

INHALATION: IF INHALED, REMOVE TO FRESH AIR IF NOT BREATHING

GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH

CALL A PHYSICIAN.

SEE REVERSE SIDE

PREVIOUS ISSUE: 25-JUL-89 CURRENT ISSUE: 06-MAR-90 KD-1306C

SKIN CONTACT: FLUSH SKIN WITH PLENTY OF WATER. REMOVE CONTAMINATED CLOTHING. CALL A PHYSICIAN IF IRRITATION PERSISTS.
EYE CONTACT: IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. EYELIDS SHOULD BE HELD APART DURING IRRIGATION. TO INSURE WATER CONTACT WITH ENTIRE SURFACE OF EYES AND LIDS. CALL A PHYSICIAN.

FIRE AND EXPLOSION HAZARD DATA

EXTREMELY FLAMMABLE.

DO NOT INCINERATE (BURN) CONTAINER. AVOID HEAT.

KEEP CONTAINER BELOW 120 F (50 C). HIGH TEMPERATURES MAY CAUSE BURSTING. DO NOT PLACE CONTAINER ON RADIATOR, STOVE, IN DIRECT SUNLIGHT OR NEAR OTHER HEAT SOURCES. DO NOT PUNCTURE CONTAINER. CONTENTS UNDER PRESSURE WILL DISCHARGE. AVOID OPEN FLAMES, SPARKS, PILOT LIGHTS. DO NOT SMOKE. VAPOR MAY IGNITE EXPLOSIVELY. SPRAY MIST OR VAPOR EVAPORATING FROM A DEPOSITED FILM IS HEAVIER THAN AIR AND MAY SETTLE IN LOW PLACES OR TRAVEL OUTWARD TO A SOURCE OF IGNITION AND FLASHBACK.

IN CASE OF FIRE, USE DRY CHEMICAL, FOAM OR CO2. WATER MAY BE INEFFECTIVE, BUT SHOULD BE USED TO KEEP FIRE-EXPOSED CONTAINERS COOL.

REACTIVITY DATA

NORMALLY STABLE AS DEFINED IN NFPA 704-12(4-3.1).

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

INCOMPATIBILITIES: STRONG OXIDIZERS.

OTHER HAZARDS: NONE KNOWN TO BORDEN.

DECOMPOSITION PRODUCTS MAY INCLUDE: OXIDES OF CARBON.

CONTROL MEASURES

IF AIRBORNE CONTAMINANTS ARE GENERATED WHEN THE MATERIAL IS HEATED OR HANDLED, SUFFICIENT VENTILATION IN VOLUME AND AIR FLOW PATTERNS SHOULD BE PROVIDED TO KEEP AIR CONTAMINANT CONCENTRATION LEVELS BELOW ACCEPTABLE CRITERIA.

ENGINEERING CONTROLS: THE FOLLOWING EXPOSURE CONTROL TECHNIQUES MAY BE USED TO EFFECTIVELY MINIMIZE EMPLOYEE EXPOSURE: LOCAL EXHAUST VENTILATION, ENCLOSED SYSTEM DESIGN, PROCESS ISOLATION AND REMOTE CONTROL IN COMBINATION WITH APPROPRIATE USE OF PERSONAL PROTECTIVE EQUIPMENT AND PRUDENT WORK PRACTICES. THESE TECHNIQUES MAY NOT NECESSARILY ADDRESS ALL ISSUES PERTAINING TO YOUR OPERATIONS. WE, THEREFORE, RECOMMEND THAT YOU CONSULT WITH EXPERTS OF YOUR CHOICE TO DETERMINE WHETHER OR NOT YOUR PROGRAMS ARE ADEQUATE.

PERSONAL PROTECTION INFORMATION

WHERE AIR CONTAMINANTS CAN EXCEED ACCEPTABLE CRITERIA, USE OF MSHA APPROVED RESPIRATORY PROTECTION EQUIPMENT (RESPIRATORS) SHOULD BE SELECTED BASED ON THE FORM AND CONCENTRATION OF CONTAMINANTS IN AIR IN ACCORDANCE WITH OSHA 29 CFR 1910.134 OR OTHER APPLICABLE STANDARDS OR GUIDELINES.

USE GOGGLES IF CONTACT IS LIKELY.

WEAR IMPERVIOUS GLOVES AS REQUIRED TO PREVENT SKIN CONTACT.

SPILL OR LEAK PROCEDURES

ELIMINATE ALL IGNITION SOURCES.

SOAK UP WITH ABSORBENT MATERIAL AND REMOVE TO A CHEMICAL DISPOSAL AREA.

PREVENT ENTRY INTO NATURAL BODIES OF WATER.

WASTE DISPOSAL

DISPOSE OF ACCORDING TO LOCAL, STATE AND FEDERAL REQUIREMENTS.

EMPTY CONTAINER MAY CONTAIN EXCESS VAPORS OF VAPOR. PUNCTURE OR WELD ON OR NEAR.

INCINERATION WILL CAUSE CONTAINER TO BURST.

STORAGE PRECAUTIONS

KEEP CONTAINER CLOSED.

STORE IN A COOL, WELL-VENTILATED AREA.

DO NOT STORE AT TEMPERATURES ABOVE 120 F.

AVOID RADIATORS, STOVES, DIRECT SUNLIGHT, OR OTHER HEAT SOURCES.

KEEP AWAY FROM HEAT, SPARKS, FLAME AND OTHER IGNITION SOURCES.

DO NOT STORE NEAR STRONG OXIDIZING CHEMICALS.

DOT CLASSIFICATION

ORM-D CONSUMER COMMODITY.

BARA TITLE III SECTION 313 AND 40 CFR PART 372

TOXIC CHEMICAL NOTIFICATION SHEET

KRYLON 1300 WORKABLE FIXATIVE SPRAY COAT.

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986, AND SUBPART C-SUPPLIER NOTIFICATION REQUIREMENT OF 40 CFR PART 372.

CAS REGISTRY NUMBER	CHEMICAL NAME	PCT. BY WEIGHT
67-64-1	ACETONE	62.00
	- GLYCOL ETHERS	5.88
	- GLYCOL ETHERS	1.40

THIS TOXIC CHEMICAL NOTIFICATION SHEET MUST NOT BE DETACHED FROM THE MATERIAL SAFETY DATA SHEET (MSDS). ANY COPYING AND REDISTRIBUTION OF THE MSDS SHALL INCLUDE COPYING AND REDISTRIBUTION OF THIS NOTIFICATION SHEET ATTACHED TO COPIES OF THE MSDS SUBSEQUENTLY REDISTRIBUTED.

PREVIOUS ISSUE 25-JUL-89 CURRENT ISSUE 06-MAR-90 KD-1306C

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